

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION

RC-401

Effective May 1, 2014

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation in **May 2018**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

**PV 150 24 Gauge Standing Seam Metal Roofing Panels Installed Over Plywood Deck**, manufactured by

**P.V.R. Construction, LLC**  
**23103 Park Road**  
**Tomball, Texas 77377**  
**Telephone: (281) 808-6484**

will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

This evaluation report is for the PV 150 standing seam metal roofing panels installed over a plywood deck. The standing seam metal roof panels in the evaluation report are minimum 24 gauge steel with an optional paint finish. The metal roofing panels have a maximum coverage of 16 inches. The metal roofing panels have a 1.5" tall mechanical double lock standing seam rib. The 24 gauge steel material is ASTM A 792 AZ-55, Grade 50, with a 50 ksi yield point with optional paint finishes. Panels shall be formed with the panel rollformer specifications and tolerances. Panel rollformer by Knudson Manufacturing, Inc.

## LIMITATIONS

**Roof Framing:** The standing seam metal roofing panels shall be installed over a minimum nominal 15/32" plywood deck.

**New Roof Framing Attachment:** The roof framing shall meet or exceed the uplift requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to wind loads.

**Design Wind Pressures:** The design pressures shall be as specified in Table 1.

**Roof Slope:** The metal roofing panels may be installed on roofs with a roof slope as low as 2:12 if sealant is used on the panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

**Installation Over an Existing Roof Covering:** Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing, or roll roofing applied over an existing, solid roof deck of minimum  $1\frac{5}{32}$ " plywood. Note: Inspection of the existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before the metal roofing panel installation proceeds. NOTE: Underlayment is not required to be installed.

Table 1  
24 Gauge PV 150 Standing Seam Panels Over  
Minimum  $1\frac{5}{32}$ " Plywood Decks

Design Pressure (psf)	Clip On Center Spacing	Clip Fastener
-71.0	24"	(2) No. 10-12
-93.5	18"	(2) No. 10-12
-116.0	12"	(2) No. 10-12
-138.5	6"	(2) No. 10-12

### INSTALLATION INSTRUCTIONS

**General:** The standing seam metal roofing panels shall be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

**Panels:** The standing seam metal roofing panels shall be secured to the roof deck as specified in Table 1.

**Underlayment:** A minimum of one layer of No. 30 (Type II) asphalt felt shall be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed with 6-inch side laps and 3-inch end laps. The underlayment shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners shall be applied along the overlaps not farther apart than 36 inches on center.

**Attachment of Metal Roof Panels to the Wood Deck:** The panels are secured to the wood deck with a sliding clip. The clip spacing shall be as specified in Table 1. Each clip is secured to the wood deck with two (2) No. 10-12 x 1" Pancake Type A screws. The fasteners shall be long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall be increased so that the fasteners are long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the existing plywood roof decking).

**Panel Clip:** Two piece sliding clip. 24 gauge x 3" long galvanized steel top. 18 gauge x 3" long galvanized steel base.

**Panel Seam:** The panel is seamed to a 180 degree seam (double lock) with a mechanical seamer.

**Panel Ends and End Laps:** The panel ends and endlaps shall be secured to the steel purlins as required by the manufacturer.

**Panel Edges:** The panel edges shall be secured to the steel purlins as required by the manufacturer.

**Trims, Closures, and Accessories:** Components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim shall be installed as required by the manufacturer.

**Alternative Fasteners:** Alternative fasteners of equal or greater strength may be substituted.

**Note:** The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.